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Public Health and Solitary Confinement in the United States

David H. Cloud, JD, MPH, Ernest Drucker, PhD, Angela Browne, PhD, and Jim Parsons, MsC

The history of solitary confinement in the United States stretches from the silent prisons of 200 years ago to today's supermax prisons, mechanized panopticons that isolate tens of thousands, sometimes for decades. We examined the living conditions and characteristics of the populations in solitary confinement.

As part of the growing movement for reform, public health agencies have an ethical obligation to help address the excessive use of solitary confinement in jails and prisons in accordance with established public health functions (e.g., violence prevention, health equity, surveillance, and minimizing of occupational and psychological hazards for correctional staff).

Public health professionals should lead efforts to replace reliance on this overly punitive correctional policy with models based on rehabilitation and restorative justice. (*Am J Public Health.* 2015;105:18–26. doi: 10.2105/AJPH.2014.302205)

WITH 2.3 MILLION PEOPLE IN its jails and prisons, the United States incarcerates more people than any other nation. At 716 per 100 000 people, the US per capita incarceration rate is more than 7 times the average in European Union countries. With only 5% of the world's population, the United States now accounts for one quarter of its prisoners.[1] The United States not only incarcerates the most people, but also exposes more of its citizenry to solitary confinement than any other nation. The best available data suggest that about 84 000 individuals endure extreme conditions of isolation, sensory deprivation, and idleness in US correctional facilities.[2] Federal data indicate that from 1995 to 2005, the number of people held in solitary confinement increased by 40%, from 57 591 to 81 622 people.[3] Even in jurisdictions where the prison population has declined in recent years, the number of people in solitary has grown. For instance, from 2008 through 2013, the number of people in solitary confinement in federal prisons grew

by 17%—from 10 659 to 12 460 prisoners——almost triple the 6% rise in the total prison population for that same period.[4]

FROM SILENCE TO SUPERMAX

The United States began experimenting with solitary confinement more than 200 years ago, when American penology was undergoing a philosophical transformation, influenced by the Enlightenment, which sought to distance itself from the brutality of corporal punishment.[5] The pioneers of solitary confinement were activist reformers who believed that silence and solitude would induce repentance and motivate prisoners to live a devout, socially responsible life.[6] This theory served as the basis for the establishment of the United States' first silent prisons: penitentiaries where every prisoner was placed in solitary confinement.

The penological premise of silent prisons intrigued prominent 19th-century thinkers, including political theorist Alexis de Tocqueville and literary icon Charles Dickens, who traveled to the United States to observe what was being publicized as a revolutionary system for rehabilitating individuals convicted of crimes.[7] After observing people isolated in dark cells in Pennsylvania's Eastern Penitentiary, however, both men revised their views about the rehabilitative potential of silent prisons. de Tocqueville remarked,

> This absolute solitude, if nothing interrupts it, is beyond the strength of man; it destroys the criminal without intermission and without pity; it does not reform, it kills.[8(p311)]

Dickens condemned silent prisons in his travel diaries as "a secret punishment which slumbering humanity is not roused up to stay."[9(p69)]

Mid-19th-century physicians in the United States and Europe echoed these concerns, reporting on the distinct patterns of symptoms—labeled prison psychosis and solitary confinement psychosis——caused by prolonged isolation with a lack of natural light, poor ventilation, and lack of meaningful human contact.[10,11] In *Prison Discipline in America* (1848), Francis Gray, who observed more than 4000 people in US silent prisons, concluded,

> [T]he system of constant separation . . . even when administered with the utmost humanity produces so many cases of insanity and of death as to indicate most clearly, that its general tendency is to enfeeble the body and the mind.[12(p181)]

In 1843, B. H. Coates reported to the Philadelphia College of Physicians that African Americans were disproportionately subjected to solitary confinement in Eastern State Penitentiary "without air, exercise, or sunshine," and had twice the relative mortality rate of other racial and ethnic groups in the prison.[13(p406)]

As the evidence accumulated in the medical community, the legal community followed in noting the inhumanity and detrimental psychological impacts of solitary confinement. In 1890, the US Supreme Court was so appalled by the effects of solitary confinement on a habeas corpus petitioner that it issued a ruling ultimately setting free a man convicted of murder.[14] As it became clear to legal, medical, and correctional authorities that solitary confinement had failed to achieve its intended purposes and caused unnecessary mental anguish and suffering, jails and prisons gradually stopped using it with any regularity.[15]

This shift away from solitary confinement was short lived. The federal government opened Alcatraz Prison in 1934 and, in 1963, a penitentiary in Marion, Illinois, that included segregation blocks to house those who were considered a significant risk to the safety of other prisoners or staff. States soon followed suit, establishing designated cellblocks to separate the most threatening prisoners.

In the 1970s a philosophical sea change occurred in US penology. Deontological philosophies of retribution and deterrence replaced rehabilitation as the operational purpose of corrections. Courts and law enforcement increasingly attributed crime to the moral failings of the individual, largely ignoring the social determinants of criminal behavior, such as poverty, substandard education, addiction, and inequities in access to health care.[16] Responding to a burgeoning fear of crime, the United States instituted long, mandatory prison sentences, built more prisons, and (in some cases) abolished parole. From 1972 to 2012, the nation's prison population grew by 706%.[17] It was in the sociopolitical context of this large-scale prison growth that solitary confinement rapidly expanded——not as an idealized system for inducing repentance or a necessary measure to separate only the most dangerous individuals, but instead as a more routinely applied punitive tactic to control overcrowded jails and prisons.[18,19]

Nowadays, solitary confinement is typically used either to punish prisoners for violating rules (known as disciplinary segregation), remove prisoners from the general prison population who are thought to pose a safety risk (known as administrative segregation), or protect vulnerable individuals believed to be at risk in the general prison population.[20]

Pelican Bay, the first high-security (supermax) prison built solely to house prisoners in segregation, opened in California in 1989. In supermax prisons, all prisoners are held in high levels of confinement in cells designed to restrict visual and tactile contact with others, typically for long periods. By 2004, 40 states had built or repurposed prisons as supermax facilities, like Pelican Bay, while hundreds of other prisons established segregation units inside existing facilities.[21] Most state departments of correction do not keep reliable data about or report on the average duration of prisoners' segregation. Depending on the reasons an individual is placed in isolation and whether the correctional facility imposes indeterminate sanctions, the length of stay can range from days to months to decades.[22]

LIFE IN SOLITARY

Living conditions in solitary confinement are physically unhealthy, extremely stressful, and psychologically traumatizing. The typical cell is 60 to 80 square feet,

with a cot, a toilet, a sink, a narrow slit for a window, and sometimes a small molded desk bolted to the wall. In many facilities, cells have a steel door with a small slot for delivering meals.

Inmates have little exposure to natural sunlight; bright fluorescent lights illuminate each cell, often through the night, disrupting natural sleep cycles and circadian rhythms. Some solitary confinement units are nearly silent except for sudden outbursts; others subject prisoners to an incessant cacophony of clanking metal doors, jingling keys, booted footsteps, and distressed voices reverberating off thick walls. In more modern units, electronic doors, search cameras, and intercoms create a mechanized environment that minimizes face-to-face interaction. Prisoners are typically taken out of their cells for only 1 hour on weekdays for recreation or a shower, or, in some systems, once a week for 5 hours. Before being moved from their cells, prisoners are cuffed and often shackled at the waist and placed in leg irons. Recreation usually occurs in either an open cage outdoors or an indoor area, sometimes with an open, barred top. Some prisons offer group therapy sessions, but, in many facilities, participants are chained to metal chairs that are mounted to the floor of a cage.

Many people live in these conditions for years without the opportunity to engage in the types of human interaction, treatment, job training, and educational experiences that would help them adjust when reentering the general prison population or society.[23–27] In the federal system and in at least 19 states, policies permit locking people into solitary confinement indefinitely.[28]

THE PEOPLE IN SOLITARY

It is commonly thought that solitary confinement is reserved for incorrigibly violent, dangerous people––the worst of the worst. In fact, only a small percentage of people held in isolation need to be continuously separated from the general population. In some jurisdictions, the majority of people in disciplinary segregation do not pose a threat to staff or other prisoners, but are placed in segregation for minor rule infractions, such as talking back (insolence), smoking, failing to report to work or school, refusing to return a food tray, or possessing an excess quantity of postage stamps.[29]

Segregation units also hold a disproportionate number of individuals who are especially vulnerable in correctional settings, such as people with a serious mental illness or who are developmentally delayed, very young, or considered especially sexually vulnerable. These individuals are often particularly sensitive to the detrimental impacts of isolation. Many of the 95 000 adolescents in adult jails and prisons are housed in segregation cells, either to protect them from being victimized by adults or as a result of often minor disruptive behavior.[30] With an abundance of rules, but a shortage of quality treatment, prisons route people with psychiatric conditions to disciplinary segregation for minor rule infractions or to administrative segregation to protect or control them. Nearly a third of people housed in segregation units have 1 or more preexisting psychiatric conditions.[31–33]

Because of housing policies and inadequate programming, lesbian, gay, bisexual, transgender, and queer individuals; pregnant women; and people with infectious diseases may find themselves in solitary confinement solely because of their identity or medical condition.[34] Finally, tens of thousands of people are assigned to administrative segregation because of perceived gang affiliation. In some jurisdictions, assignment to administrative segregation is based solely on a point system that includes factors such as tattoos, known associates, and possessions suggesting gang affiliation, without regard to individual behaviors.[35]

A GROWING MOVEMENT FOR REFORM

Civil rights lawsuits, prisoner-led hunger strikes, scrutiny from international human rights authorities, increased media attention, and mounting fiscal pressures have prompted some jurisdictions to rethink the place of solitary confinement in their criminal justice system. At the state and local level, a combination of tireless grassroots advocacy and timely litigation has already spurred dramatic reductions in the use of solitary confinement in some state prison systems, such as Ohio, Mississippi, and Maine, and others are showing signs of meaningful reform.[36,37]

In early 2014, following a federal lawsuit brought by the New York Civil Liberties Union, a coalition of advocates and state legislators introduced what potentially represents the most comprehensive legislative effort to date to curb the use of solitary confinement.[38] In California, multiple hunger strikes involving 30 000 prisoners resulted in a certified, class action lawsuit challenging the constitutionality of administrative segregation policies and prompted congressional hearings to examine California's use of solitary confinement.[39] Other states are recognizing that, at 2 to 3 times the cost of housing in the general jail or prison population, solitary confinement provides a poor return on investment. In 2013, decisions to close 2 supermax units, the Tamms Correctional Center in Illinois and the Centennial Correctional Facility in Colorado, cited fiscal pressures.[40] Several states are working with nonprofit organizations to curb segregation practices. The Segregation Reduction Project, led by the Vera Institute of Justice, has been working with corrections officials in Illinois, Washington State, New Mexico, and Pennsylvania to develop more humane and effective alternatives to solitary confinement.[22]

The US Congress is also increasingly active on this issue. The Senate Judiciary Subcommittee on the Constitution, Civil Rights, and Human Rights has held 2 hearings on the overuse of solitary confinement (in June 2012 and February 2014); an exonerated former death row inmate, clinical psychologists, and corrections administrators were among those who testified in favor of measures to reduce segregation in the prison

system. The subcommittee also received written statements from advocacy groups; human rights authorities; professional societies; religious organizations; family members with loved ones being held in solitary; correctional physicians; immigration think tanks; advocates for lesbian, gay, bisexual, and transgender persons; law professors; philosophers; and criminologists. These hearings resulted in the Bureau of Prisons agreeing to an independent assessment of its use of solitary confinement.[41,42]

A PUBLIC HEALTH ETHICAL FRAMEWORK

The duty of public health professionals is to prevent disease morbidity and premature mortality in all populations by maximizing social, environmental, and structural conditions required for healthy living and abating harmful conditions.[43] The social determinants of health perspective acknowledges the need to shift the focus of public health beyond the medical treatment of cases to the role of education, housing, transportation, business, community planning, and agriculture in determining outcomes.[44] Increasingly, population health researchers and policymakers see incarceration as a major social determinant of health, opening the way for a more assertive public health role in addressing conditions inside correctional facilities.[45]

Nearly every scientific inquiry into the effects of solitary confinement over the past 150 years has concluded that subjecting an individual to more than 10 days of involuntary segregation results in a distinct set of emotional, cognitive, social, and physical pathologies. This is not solely a corrections issue; the overwhelming majority of people incarcerated will be released, and the impact of long periods of isolation on their health, employability, and future life chances will be felt in the families and communities to which they return. It is important to understand the health impacts of the widespread use of segregation at the population level, in addition to assessing the effect of time spent in solitary confinement on individual health outcomes.

Addressing solitary confinement undoubtedly requires government action from corrections agencies, state legislatures, and executive leaders, but public health professionals also have an important role to play. In November 2013, the American Public Health Association issued an official policy statement recognizing solitary confinement as a public health issue and issuing a set of recommendations (see the box on page e4).[46] Public health agencies can apply approaches rooted in violence prevention, health equity, surveillance, occupational health, social justice, and human rights to address the overuse of segregation.

A Matter of Violence Prevention

Public health agencies have a duty to prevent violence in society by identifying its causes and correlates and implementing interventions to reduce its occurrence.[47,48] For instance, the Division of Violence Prevention of the Centers for Disease Control and Prevention follows a social-ecological model in describing its role: to monitor and track the incidence of violence; to empirically determine which individual, relationship, community, and societal factors affect the risk for violence; to evaluate violence prevention initiatives; and to push for the adoption of evidence-based prevention approaches. As a matter of violence prevention, public health agencies should work in collaboration with correctional systems to reduce the use of solitary confinement in jails and prisons.

Violence is endemic in correctional environments. Suicide is a leading cause of death, accounting for one third of deaths in jails between 2000 and 2009.[49] The incidence of self-harm, injuries inflicted on correctional staff, and suicide among prisoners is significantly higher in segregation units than in the general prison or jail population.[50] For example, in New York, suicide rates are 5 times as high among prisoners in solitary confinement as among those in the general prison population.[51] More than 60% of the suicides committed by youths while in correctional facilities take place in solitary confinement.[52]

American Public Health Association Action Steps to Address Solitary Confinement

Eliminate the use of solitary confinement as a punishment and create alternative disciplinary measures tailored to individuals with serious mental illnesses.

Eliminate the use of solitary confinement as a tactic to promote institutional security, except when there is no less restrictive option available to address a serious, imminent, and ongoing safety threat.

If an individual must be segregated, then he or she should be confined in the least restrictive conditions possible, and protocols must be in place to return the individual to the general population once there is no longer a pressing threat.

Individuals with serious mental illness must never be placed in solitary confinement.

Juveniles must never be placed in solitary confinement, regardless of whether they are in adult or juvenile facilities.

Segregating people for medical reasons should only take place upon direction of a physician and must take place in the least restrictive environment for the shortest duration possible.

People who must be separated from the general population for their own protection must be placed in the least restrictive conditions possible.

The violence induced by conditions of solitary confinement is not limited to the prison environment. Studies show that prisoners who are released from segregation directly to the community reoffend more quickly and at higher rates than prisoners who spent at least 3 months back in the general prison population before their return to the community.[53] Releasing people directly from solitary confinement to communities without any rehabilitative programming to help them transition is a perilous but common practice. For instance, in 2011, Texas released 1347 individuals directly from administrative segregation to the streets without any rehabilitative programming.[54] This can have a direct impact on the occurrence of violence in community settings.

Decreasing the use of segregation has also been shown to protect against future violence. Mississippi's prison system, which reduced the use of solitary confinement by more than 80% and moved prisoners with serious psychiatric problems to an alternative setting, realized a 70% decrease in the incidence of violence.[36] More public health agencies should view violence that results from conditions of confinement as a public health issue and partner with corrections officials to develop more humane housing and incentive structures to reduce segregation and curtail violence.

Health Equity

Public health authorities also have an ethical duty to narrow health inequities attributable to social factors that "systematically put groups of people who are already socially disadvantaged or disenfranchised at further disadvantage with respect to their health."[43(p254)] People with serious psychiatric conditions are among society's most vulnerable and stigmatized populations. The grave overrepresentation of people with serious mental illnesses in the nation's prisons and jails—and within segregation units in particular—is a public health crisis that demands a response.

A recent survey found that in 44 states, more people with serious mental illness are confined in the jails and prisons throughout each state than in the largest remaining state psychiatric hospital.[55] Members of this population are significantly more likely than other prisoners to end up in solitary confinement, for several reasons. People with psychiatric conditions or developmental delays may experience difficulties complying with facility rules and may be placed in disciplinary segregation as a result. Correctional officers often lack sufficient training and may interpret the symptoms of psychiatric distress as willful noncompliance with facility rules and respond punitively. Persons with psychiatric conditions are also more likely to be victimized by other prisoners and are often placed in administrative segregation for protection. Access to quality psychiatric care in most correctional facilities is severely limited, and segregation is too commonly used in systems that lack sufficient behavioral health services to meet the needs of their inmates. Health departments must continue to work in partnership with criminal justice agencies to divert people with serious mental illness from incarceration and develop sufficiently funded, community-based alternatives.

Several components of the Affordable Care Act, including the expansion of Medicaid eligibility and stronger parity for behavioral health coverage, create new opportunities for criminal justice and public health agencies to develop programmatic solutions to the problem of correctional facilities serving as de facto behavioral health providers. At the same time, public health authorities should play a larger role in overseeing health care services and formulating standards for the quality of medical and behavioral health care in correctional facilities. Regulations should be issued to fund sufficient staffing, medication formularies, and treatment options to allow health care professionals working in correctional facilities to uphold their ethical obligations.

Occupational Health Hazards

Mitigating occupational health hazards is another classic role of public health agencies.[56] Working conditions in segregation units are psychologically stressful and can be physically harmful. Correctional officers are at risk for injury, and they endure some of the same conditions as the prisoners. Prisoners held in isolation have no social contact with other prisoners and struggle with the lack of physical activity, effects of sensory deprivation, and sense of extreme powerlessness. Correctional officers responsible for enforcing rules, applying shackles, and controlling behavior are their main source of human interaction. Participation in such a system is a stressful and demoralizing experience that can breed distrust, frustration, anger, psychological damage, and sometimes violence on the part of both prisoners and officers.

Reflecting on what it is like to work in an isolation unit, a New Jersey prison officer noted,

> When I see a human being who is reduced to throwing feces and urine, it wears me down. . . . I am breathing the same canned air, sitting under the same fluorescent lights, listening to the same noises. I don't believe this is good for officers or good for the prisoners.[57]

Staff members of the Mississippi Department of Correction reported dramatic improvements in their work environments connected to lower levels of stress and violence after the prison implemented major reductions in solitary confinement.[36]

Clinicians who deliver medical and mental health treatment to people in solitary confinement also experience occupational hazards. In the face of the monotony, deprivation, and punitive environment of segregation units, many prisoners resort to feigning illness or engaging in self-harm in an attempt to be removed to a medical setting. Correctional health providers are routinely required to determine whether adaptive behavior to avoid anguish caused by solitary confinement is connected to a "legitimate" health concern. This places providers in an ethical bind: labeling prisoners' behavior as malingering typically means that they will continue to be held in solitary and may receive additional punishment.

The conditions of solitary confinement also impinge on medical providers' autonomy and jeopardize their ability to meet their ethical obligations as clinicians. For example, health care providers are frequently asked to conduct mental health consultations through a slit in a cell's steel door or on an open tier with barred cell fronts that offer no privacy and no ability to develop trust and patient rapport. Health care professionals working in prisons routinely encounter the detrimental impact that solitary confinement has on a person's physical and mental health. Yet mental health providers lack the authority to remove individuals from these settings or to authorize better health services. Thus, clinicians can become extremely frustrated trying to deliver care in these settings, under environmental conditions and systems of rules that undermine their ability to uphold their obligations as medical professionals to pursue beneficence and alleviate malfeasance for their patients.[58]

Surveillance

Surveillance of health outcomes is a core function of public health and critical for identifying risk factors, causal pathways, and protective factors against disease as a basis for allocating resources and informing targeted interventions. Despite the high prevalence of health conditions among prisoners, most health departments do not track the prevalence of diseases or the incidence of violence in correctional settings. This leads to underestimation of the actual burden of disease in society and fails to detect the health effects that segregation and other conditions of confinement have on the communities most affected by incarceration.[59] Health departments can assist in unveiling the curtain of secrecy that cloaks most prison and jail environments from public (and public health) scrutiny.

Most research on the effects of solitary confinement on health has involved clinical case studies and surveys with relatively small samples. Most state and local systems, as well as the Federal Bureau of Prisons, have not independently evaluated the long-term health impacts of segregation. The limited capacity of corrections systems to study the issue and the lack of reliable data highlight the need for public health researchers to initiate more and better investigations, and the theory, methods, and metrics of epidemiology can provide a compelling, data-driven approach to understanding the health impacts of corrections policies.

In analogous contexts, epidemiologists have documented the health impacts of widespread exposure to traumatic experiences associated with human rights abuses.[60] Similar approaches could be used to assess the incidence of psychopathologies associated with segregation and the relationships between solitary confinement and disease trajectories over time. Psychiatric epidemiologists might adopt models from studies of the impact of political imprisonment on populations in conflict settings.[61–64] For example, research might focus on the relationship between time spent in solitary confinement and the incidence of negative health outcomes or evaluate measures designed to reduce the use of isolation. Public health researchers can use their expertise and methods in the service of committees commissioned by legislatures to study the impacts of solitary confinement or to explore alternative housing policies.

Reliable data collection is essential for public health research and policymaking. To advocate changes in the use of solitary confinement, it will be important to empirically describe the relationship between environmental factors associated with segregation and clinical outcomes, including suicide attempts, violent incidents, and mental health crises. The National Institute of Corrections reported that only a few states used data systems that could accurately aggregate descriptive information about the population in their custody, and state corrections departments could not easily produce data on the number of people held in administrative segregation, punitive segregation, or protective custody or on the prevalence of mental health and other health issues for those kept in isolation.[65] Increased capacity and commitment to collecting basic health data will play an essential role in evaluating segregation policies.

The increasing numbers of correctional systems that have electronic health records offer a particularly promising opportunity to facilitate epidemiological analysis of the health impacts of such correctional policies as disciplinary or long-term administrative segregation. For example, the Bureau of Correctional Health Services, the unit of New York City's Department of Health and Mental Hygiene responsible for overseeing the provision of health services at the city's jails, adopted an electronic health record in 2011. This allows the bureau to record and categorize all injuries that occur in the city's jails according to Centers for Disease Control and Prevention criteria. For each injury, including injuries that occur in segregation units, information is collected on intentionality, reported cause, type of injury, and location in the jail where it occurred. The bureau used data produced by the electronic record to reveal a significant increase in acts of self-harm in the jail system between 2009 and 2012, despite a 9% drop in the average daily population. Over the same period, the use of solitary confinement in city jails increased by approximately 60%.

Electronic health record data also allowed the city's epidemiologists to contrast the characteristics of groups within the jail population who inflicted self-harm with a comparison group who did not engage in self-harm. They found that prisoners with records of self-harm had substantially higher rates of recidivism, serious mental illness, and exposure to solitary confinement than patients who did not engage in self-harm.[66]

Increasingly, European countries are creating independent, nonprofit agencies to monitor the health of incarcerated populations.[67] Independent monitoring boards in correctional facilities can improve the treatment of prisoners and help protect them from abuse.[68] With a few exceptions,

equivalent agencies do not exist in the United States. A lack of independent mechanisms for holding correctional agencies and legislators accountable for health outcomes in corrections facilities means that serious problems in jails and prisons typically only come to light if legislators, advocates, litigators, family members, or the media raise concerns. To ensure improved health surveillance, public health leaders should urge state and city legislative bodies to create independent health authorities to monitor conditions, policies, and practices in jails and prisons and should press for funding for needed medical and mental health care.

Human Rights and Social Justice

The principles of social justice lie at the core of public health and establish an ethical duty for public health agencies to redress infringements on human rights. Influential public health figures, perhaps most notably Jonathan Mann, have articulated the essential importance of incorporating the pursuit of human rights into the ethics and core functions of public health. As Mann et al. observed,

> A taxonomy and an epidemiology of violations of dignity may uncover an enormous field of previously suspected, yet thus far unnamed and therefore undocumented damage to physical, mental and social well-being.[69(p18)]

The human rights community now recognizes that the excessive use of solitary confinement in the United States violates norms designed both for the universal protection of human dignity and for the protection of prisoners and detainees. For example, the United Nations has declared that more than 15 days in solitary confinement violates human rights standards. The Committee Against Torture, the governing body of the Convention Against Torture, to which the United States is a party, has recommended that solitary confinement be abolished entirely because of its harmful effects on prisoners' mental and physical health.[70] The US courts and legal system have not been receptive to international norms in this area. Public health agencies, researchers, corrections professionals, and advocates must push for action, providing the leadership to increase transparency, use public health metrics to assess solitary confinement's impact on the health of prisoners and communities, and help advance policies to abate prolonged solitary confinement in the nation's penal system.

CONCLUSIONS

The widespread use of solitary confinement in America's prisons undermines our nation's public health and safety and is a particularly traumatic element of mass incarceration. Legal scholars and human rights advocates now recognize prolonged segregation as a form of torture, making it the most significant Eighth Amendment violation in US prisons. Although some states have dramatically reduced the number of people kept in segregation and achieved a reduction in violence, among other positive outcomes, other states continue to place large numbers of prisoners in solitary confinement and are resistant to change.

Momentum is growing nationally to reduce solitary confinement in jails and prisons, motivated by the realization that it is overused, causes severe and lasting mental health consequences for prisoners and staff, costs much more than other modes of incarceration, and makes our prisons and our communities less safe. To bring about significant and lasting change, we must acknowledge that disciplinary and administrative segregation are not simply an unintended consequence of overstretched correctional budgets and overcrowding. The United States' overuse of isolation has become a cornerstone of the nation's penal philosophy—a choice to widely apply the harshest form of punishment across large segments of the incarcerated population. Widespread and lengthy solitary confinement has been universally denounced by international human rights and social justice organizations and restricted or abandoned by most developed democracies. Public health professionals have an ethical obligation to take the lead in insisting that governments replace reliance on this punitive correctional policy with modern models based on rehabilitation and restorative justice. ■

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Assessing the Expected Impact of Global Health Treaties: Evidence From 90 Quantitative Evaluations

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We assessed what impact can be expected from global health treaties on the basis of 90 quantitative evaluations of existing treaties on trade, finance, human rights, conflict, and the environment.

It appears treaties consistently succeed in shaping economic matters and consistently fail in achieving social progress. There are at least 3 differences between these domains that point to design characteristics that new global health treaties can incorporate to achieve positive impact: (1) incentives for those with power to act on them; (2) institutions designed to bring edicts into effect; and (3) interests advocating their negotiation, adoption, ratification, and domestic implementation.

Experimental and quasiexperimental evaluations of treaties would provide more information about what can be expected from this type of global intervention. (*Am J Public Health.* 2015; 105:26–40. doi:10.2105/AJPH.2014.302085)

THERE HAVE BEEN MANY calls over the past few years for new international treaties addressing health issues, including alcohol,[1] chronic diseases,[2] falsified/substandard medicines,[3] health system corruption,[4] impact evaluations,[5] nutrition,[6] obesity,[7] research and development,[8] and global health broadly.[9] These calls follow the perceived success of past global health treaties—most notably the Framework Convention on Tobacco Control (2002) and the revised International Health Regulations (2005)—and perceived potential for future impact.[10] The World Health Organization's unusually expansive yet largely dormant powers for making new international treaties under its constitution's articles 19 and 21 are also cited as a reason for using them.[11–13] Although few multilateral institutions are empowered to enact new treaties, in the World Health Organization's case, with just a majority vote of its governing assembly, new regulations can automatically enter into force for all member states on communicable disease control, medical nomenclature, diagnostic standards, health product safety, labeling, and advertising unless states specifically opt out (article 21). Treaties in other health areas can be adopted by a two thirds vote of the World Health Organization's membership, with nonaccepting states legally required to take the unusual step of justifying their nonacceptance (article 19).[14]

The effect that can be expected from any new global health treaty, however, is as yet largely unknown. Negotiation, adoption, ratification, and even domestic